CLAIMS

That which is claimed is:

1. A method of determining Simple Network Management Protocol (SNMP) object identifiers in a Management Information Base (MIB) file that identify Internet Protocol (IP) addresses, comprising the steps of:

creating an intermediate file that is a representation of the MIB file containing attribute specific information including the SNMP object identifier for each attribute;

determining all the SNMP object identifiers contained in the intermediate file that identify relevant attribute types; and

generating an output file containing the SNMP object identifiers determined to identify the relevant attribute types.

2. The method of Claim 1, wherein the relevant attribute types include an IP address type attribute and a table-based attribute that is pointed to by an IP address.

3. The method of Claim 2, wherein the determining step further comprises the steps of:

storing the SNMP object identifiers determined to identify IP address type attributes; and

storing all attributes contained in a table for table-based attributes that are pointed to by an IP address; and

determining and storing a start position of the IP address used as a pointer in the SNMP object identifier.

4. The method of Claim 3, wherein the step of determining and storing the start position further comprises the steps of:

determining if a table-based attribute is pointed to by a plurality of IP addresses; and

determining the start position of each of the plurality of IP addresses in the SNMP object identifier of the table-based attribute.

5. The method of Claim 4 further comprising the step of identifying errors in the stored SNMP object identifier and table-based attributes, so as to not create the output file if errors are identified.

6. The method of Claim 1, wherein the intermediate file further contains:

an indication of whether each attribute is a scalar attribute or a table-based attribute; and

an indication of the Abstract Syntax Notation One (ASN.1) of each attribute.

7. The method of Claim 6, wherein the ASN.1 attribute type is at least one of IpAddress, NetworkAddress, and CiscoNetworkAddress.

8. The method of Claim 1, wherein the step of generating an output file comprises the steps of:

storing a list of all object identifiers that identify IP address type attributes in the output file;

storing an indication of a start position of an IP address used as a pointer to a table-based attribute in a corresponding SNMP object identifier in the output file; and

storing an indication of which values contained in the output file need to be translated.

9. The method of Claim 8, wherein the table-based attribute is pointed to by a plurality of IP addresses and wherein the step of storing an indication of a start position comprises storing an indication of a start position for each IP address in a corresponding SNMP object identifier in the output file.

10. The method of Claim 9, wherein the plurality of IP addresses comprises at most four IP addresses.

11. The method of Claim 1, wherein the MIB file is a Structure of Management Information (SMI) version 1 style MIB file.

12. The method of Claim 1, wherein the MIB file is a Structure of Management Information (SMI) version 2 style MIB file.

13. The method of Claim 1, wherein the attributes are located in an SNMP data packet.

14. The method of Claim 1 further comprising the step of receiving an argument that identifies the MIB file, wherein the argument is at least one of a single file name and a list of file names.

15. The method of Claim 14 wherein the step of receiving an argument further comprises the step of determining if the argument is a list of file names; and wherein the step of creating an intermediate file comprises creating an intermediate file containing attribute specific information of all files in the list of file names if the argument is a list of file names.

16. The method of Claim 15, wherein the list of file names comprises at least one of a plurality of single file names or a plurality of lists of file names.

17. The method of Claim 1, wherein the output file is consumable by a Comprehensive Network Address Translator (CNAT) product.

18. A system for determining Simple Network Management Protocol (SNMP) object identifiers in a Management Information Base (MIB) file that identify Internet Protocol (IP) addresses, comprising:

means for creating an intermediate file that is a representation of the MIB file containing attribute specific information including the SNMP object identifier for each attribute;

means for determining all the SNMP object identifiers contained in the intermediate file that identify relevant attribute types; and

means for generating an output file containing the SNMP object identifiers determined to identify the relevant attribute types.

19. The system of Claim 18, wherein the relevant attribute types include an IP address type attribute and a table-based attribute that is pointed to by an IP address.

20. The system of Claim 19 wherein the means for determining further comprises:

means for storing the SNMP object identifiers determined to identify IP address type attributes; and

means for storing all attributes contained in a table for table-based attributes that are pointed to by an IP address; and

means for determining and storing a start position of the IP address used as a pointer in the SNMP object identifier.

21. The system of Claim 20, wherein the means for determining and storing the start position further comprises:

means for determining if a table-based attribute is pointed to by a plurality of IP addresses; and

means for determining the start position of each of the plurality of IP addresses in the SNMP object identifier of the table-based attribute.

22. The system of Claim 21 further comprising means for identifying errors in the stored SNMP object identifier and table-based attributes, so as to not create the output file if errors are identified.

23. The system of Claim 18, wherein the intermediate file further contains:

an indication of whether each attribute is a scalar attribute or a table-based attribute; and

an indication of the Abstract Syntax Notation One (ASN.1) type of each attribute.

24. The system of Claim 23, wherein the ASN.1 attribute type is at least one of IpAddress, NetworkAddress, and CiscoNetworkAddress.

25. The system of Claim 18, wherein the means for generating the output file comprises:

means for storing a list of all object identifiers that identify IP address type attributes in the output file;

means for storing an indication of a start position of an IP address used as a pointer to a table-based attribute in a corresponding SNMP object identifier in the output file; and

means for storing an indication of which values contained in the output file need to be translated.

26. The system of Claim 25, wherein the table-based attribute is pointed to by a plurality of IP addresses and wherein the means for storing an indication of a start position comprises means for storing an indication of a start position for each IP address in a corresponding SNMP object identifier in the output file.

27. The system of Claim 26, wherein the plurality of IP addresses comprises at most four IP addresses.

28. The system of Claim 18, wherein the MIB file is a Structure of Management Information (SMI) version 1 style MIB file.

29. The system of Claim 18, wherein the MIB file is a Structure of Management Information (SMI) version 2 style MIB file.

30. The system of Claim 18, wherein the attributes are located in an SNMP data packet.

31. The system of Claim 18 further comprising:

means for receiving an argument that identifies the MIB file, wherein the argument is at least one of a single file name or a list of file names.

32. The system of Claim 31 wherein the means for receiving an argument further comprises means for determining if the argument is a list of files; and

the means for creating an intermediate file comprises means for creating an intermediate file containing attribute specific information of all the files in the list of file names if the argument is a list of file names.

33. The system of Claim 32, wherein the list of file names comprises at least one of a plurality of single file names or a plurality of lists of file names.

34. The system of Claim 18, wherein the output file is consumable by a Comprehensive Network Address Translator (CNAT) product.

35. A computer program product for determining Simple Network Management Protocol (SNMP) object identifiers in a Management Information Base (MIB) file that identify Internet Protocol (IP) addresses, comprising:

a computer readable program medium having computer readable program code embodied therein, the computer readable program code comprising:

computer readable program code which creates an intermediate file that is a representation of the MIB file containing attribute specific information including the SNMP object identifier for each attribute;

computer readable program code which determines all the SNMP object identifiers contained in the intermediate file that identify relevant attribute types; and

computer readable program code which generates an output file containing the SNMP object identifiers determined to identify the relevant attribute types.

36. The computer program product of Claim 35, wherein the relevant attribute types include an IP address type attribute and a table-based attribute that is pointed to by an IP address.

37. The computer program product of Claim 36, wherein computer readable program code which determines comprises:

computer readable code which stores the SNMP object identifiers determined to identify IP address type attributes; and

computer readable program code which stores all attributes contained in a table for table-based attributes that are pointed to by an IP address; and

computer readable program code which determines and stores a start position of the IP address used as a pointer in the SNMP object identifier.

38. The computer program product of Claim 38, wherein the computer readable code that determines and stores the start position further comprises:

computer readable program code which determines if a table-based attribute is pointed to by a plurality of IP addresses; and

computer readable program code which determines the start position of each of the plurality of IP addresses in the SNMP object identifier of the table-based attribute.

39. The computer program product of Claim 37 further comprising computer readable program code which identifies errors in the stored SNMP object identifier and table-based attributes, so as to not create the output file if errors are identified.

40. The computer program product of Claim 35, wherein the intermediate file further contains:

an indication of whether each attribute is a scalar attribute or a table-based attribute; and

an indication of the Abstract Syntax Notation One (ASN.1) type of each attribute.

41. The computer program product of Claim 40, wherein the ASN.1 attribute type is at least one of IpAddress, NetworkAddress, and CiscoNetworkAddress.

42. The computer program product Claim 35, wherein the computer readable program code which generates the output file comprises:

computer readable program code which stores a list of all object identifiers that identify IP address type attributes in the output file;

computer readable program code which stores an indication of the start position of an IP address used as a pointer to a table-based attribute in the SNMP object identifier in the output file; and

computer readable program code which stores an indication of which values contained in the output file need to be translated.

43. The computer program product of Claim 42, wherein the table-based attribute is pointed to by a plurality of IP addresses and wherein the computer readable program code which stores an indication of a start position comprises computer readable program code which stores an indication of a start position for each IP address in a corresponding SNMP object identifier in the output file.

44. The computer program product of Claim 43, wherein the plurality of IP addresses comprises at most four IP addresses.

45. The computer program product of Claim 35, wherein the MIB file is a Structure of Management Information (SMI) version 1 style MIB file.

46. The computer program product of Claim 35, wherein the MIB file is a Structure of Management Information (SMI) version 2 style MIB file.

47. The computer program product of Claim 35, wherein the MIB file is located in an SNMP data packet.

48. The computer program product of Claim 35 further comprising computer readable program code which receives an argument that identifies the MIB file, wherein the argument is at least one of a single file name and a list file names.

49. The computer program product of Claim 48, wherein the computer readable program code which receives an argument further comprises computer readable program code which determines if the argument is a list of files; and

the computer readable program code which creates an intermediate file comprises computer readable program code which creates an intermediate file containing attribute specific information of all the files in the list of file names if the argument is a list of file names.

50. The computer program product of Claim 49, wherein the list of file names comprises at least one of a plurality of single file names or a plurality of lists of file names.

51. The computer program product of Claim 35, wherein the output file is consumable by a Comprehensive Network Address Translator (CNAT) product.